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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,474	11/19/2003	Tomio Kumamoto	2927-0162P	3739

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EXAMINER

BLAU, STEPHEN LUTHER

ART UNIT PAPER NUMBER

3711

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,474

Applicant(s)KUMAMOTO, TOMIO **Examiner**

Stephen L. Blau

Art Unit

3711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/19/03.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Throughout the specification there are numerous lines with no spacing causing confusion (i.e. page 6 lines 6 and 21, page 13 lines 23 and 25, page 14 lines 14-15, page 15 lines 4 and 20).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites the limitation "said region" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is uncertain what this region refers to. Claim 3 is rejected for depending on a rejected base claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kusumoto.

Kusumoto discloses a shaft of fiber reinforced resin (Col. 13, Lns. 9-18), a diameter of 9.5 mm (Col. 10, Lns. 51-54) in at least one portion of a range from a tip thereof disposed at a head mounting side to a position located at 25 % of a distance from a top to a butt (Ref. No. 51a, Fig. 9), and a minimum value of a flexural rigidity (EI) in a range set 1 to 2.5 kgm² (Fig. 11, Col. 14, Lns. 1-9).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura in view of Yamamoto.

Takemura discloses a fiber reinforced resin (Col. 23, Lns. 47-55), whose outer diameter is set to 9.5 mm in at least one portion in a range from at tip thereof disposed at a head mounting side to a position located at 25% of a distance from a tip to a butt thereof in the form of the tip end (Example 6, Table 4), a tip EI value of $2.48 \text{ kg}\cdot\text{m}^2$ (Table 6, Example 6), a reinforcing layer (Ref. Nos. 4a, 4b, 4c, 2b) in a region from a top to a position located at 25 % of a distance from a tip to a butt (Fig. 3), a reinforcing layer including a straight layer (Ref. Nos. 4a, 4b, 4c) consisting of a prepreg whose reinforcing layer has a tensile modulus of elasticity of 5-15 tons/mm² and being substantially parallel with an axis of a shaft (XN-05, Table 1, Example 6, Table 2), and an angular layer (Ref. No. 2b) consisting of a prepreg whose reinforcing fiber has a tensile modulus of elasticity of 24-40 ton/mm² and an orientation angle of 20-65 degrees with respect to an axis of a shaft (P9055F-11, Table 1, Example 6, Table 2). Takemura does not disclose specifically the weight ratio of the straight layer (Ref. Nos. 4a-4c, Fig. 3) to the angular layer (Ref. No. 2b, Fig. 3) but clearly there is a ratio and an artisan skilled in the art would have selected a suitable ratio in which .5 is included.

Takemura lacks a minimum value of an EI value in said range of 1-2.5 $\text{kg}\cdot\text{m}^2$ and a ratio of a weight of a straight layer to a weight of an angular layer being .5 to 1.

It would have been obvious to modify the shaft of Takemura to have a ratio of a weight of a straight layer (Ref. Nos. 4a-4c) to a weight of an angular layer (Ref. No. 2b) being .5 in order to ensure there is a sufficient amount of reinforcement to a tip of a shaft for a strong player who swings a club fast.

Yamamoto discloses a shaft having a reinforced tip (Fig. 3c) having EI dip from about 3 to 2 kg*m² (Fig. 4). In view of the reference of Yamamoto it would have been obvious to have a dip in EI to a minimum value in a range of 1-2.5 kg*m² in order have sufficient rigidity for a tip portion of a shaft so excessive flexibility does not result in errors at impact of a golf ball.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Greg Vidovich whose telephone number is (703) 308-1513. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858. (TC 3700 Official Fax 703-872-9306)

slb/ 2 August 2004


STEPHEN BLAU
PRIMARY EXAMINER